WHAT IS CLAIMED IS:

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1. An electrostatic discharge protection circuit for protecting an internal circuit of a semiconductor device against an electrostatic discharge, comprising:

an internal circuit connected with a first and a second power source terminal;

a transistor switching a source and a drain connected to the first and the second power source terminal, respectively, in accordance with voltage supplied to a back gate;

a first diode connected between the first power source terminal and the back gate, the first diode supplying a positive discharge voltage generated in the first power source terminal to the back gate;

a second diode connected between the second power source terminal and the back gate, the second diode supplying a positive discharge voltage generated in the second power source terminal to the back gate; and

a voltage-dividing circuit dividing and supplying the discharge voltages to the gate of the transistor, the voltage-dividing circuit controlling ON/OFF operation of a source-drain path of the transition.

2. The electrostatic discharge protection circuit according to claim 1, wherein the transistor comprises:

a first power source terminal side serving as a

source when the positive discharge voltage is supplied from the first power source terminal to the back gate, and

a second power source terminal side serving as a source when the positive discharge voltage is supplied from the second power source terminal to the back gate.

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- 3. The electrostatic discharge protection circuit according to claim 1, wherein the voltage-dividing circuit equally divides the discharge voltage and supplies the voltage to the gate.
- 4. The electrostatic discharge protection circuit according to claim 1, wherein the voltage-dividing circuit unidirectionally runs a current caused by the discharge voltage.
- 5. The electrostatic discharge protection circuit according to claim 1, comprising diodes connected between an input/output terminal of the internal circuit and the first and the second power source terminal, respectively, the diodes carrying the discharge voltage produced in the input/output terminal to the first and the second power source terminal, respectively, in the form of an electric current.